REMARKS/ARGUMENTS

Claims 1-24 are pending in the application. Claims 1, 2, 11, 12, 21, 22, and 24 are amended herein. The Applicant hereby requests further examination and reconsideration of the application in view of the foregoing amendments and these remarks/arguments.

In paragraph 2, the Examiner rejected claims 1, 3, 11, 13, and 21 under 35 U.S.C. § 102(b) as being anticipated by Futami. In paragraph 7, the Examiner rejected claims 4, 14, and 23 under 35 U.S.C. § 103(a) as being unpatentable over Futami in view of Gill. In paragraph 10, the Examiner rejected claims 5, 6, and 15 under 35 U.S.C. § 103(a) as being unpatentable over Futami in view of Araki. In paragraph 14, the Examiner rejected claims 7, 10, 17, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Futami in view of Brissette. In paragraph 14, the Examiner further rejected claims 8, 9, 18, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Futami in view of Brissette and in further view of Lambropoulos. In paragraph 16, the Examiner rejected claims 2, 12, and 22 under 35 U.S.C. § 103(a) as being unpatentable over Futami in view of Solhjell. For the following reasons, the Applicant submits that all pending claims are allowable over the cited references.

Support for the amendment of independent claim 1 can be found in original claim 2 and Fig. 4. Independent claims 11, 21, and 24 are similarly amended.

Amended claim 1 is directed to a method of signal processing and recites, inter alia, that (i) each waveform is integrated over the sampling window width to generate an integration result and (ii) the integration result is compared with a decision threshold value to generate a corresponding bit value.

Futami teaches a method for measuring the waveform of an optical signal. In the rejection of claim 1, on page 2 of the office action, the Examiner contends that Futami discloses the limitation of "each waveform is integrated over the sampling window width" and points to Futami's Fig. 4, element **64**, as an implementation of that limitation. In response, the Applicant notes that the only description of element **64** is found in Futami's paragraph [0062], which reads as follows: "The sampling oscilloscope **64** is supplied with the sweep signal from the oscillator **30** to display the waveform of the subject optical signal as an eye pattern." It is clear from this description that the only function of oscilloscope **64** is to display the eye pattern rather than to integrate waveforms as the Examiner contends. In fact, Futami does not disclose or even mention any type of signal integration at all in his entire specification. Furthermore, if signals were integrated, oscilloscope **64** would not be able to display an eye pattern as required by Futami.

On page 7 of the office action, the Examiner admitted that "Futami fails to teach wherein for each waveform, the integration result is compared with a decision threshold value." It is therefore submitted that Futami does not teach or suggest either one of the above-identified limitations (i) and (ii) of claim 1.

Of the remaining references cited by the Examiner, only Solhjell discloses the use of signal integration for data recovery. More specifically, Solhjell's Fig. 3 shows a signal-processing circuit having an integrating element (labeled IN in Fig. 3), and Solhjell's Fig. 4 shows various signals generated within that signal-processing circuit. Referring now to Solhjell's Fig. 4, trace A in the figure is a trace having a plurality of waveforms representing binary "zeros" and "ones." The binary data sequence encoded in trace A is shown just above that trace in the line labeled DA. Trace G in Fig. 4 has a series of sawteeth, each of which represents a respective integration process performed by the integrating element. For each sawtooth, the integration process starts when trace A crosses the zero level and ends either upon passage of time T (normal termination of the integration process) or if trace A crosses the zero level again before time T has passed (premature

termination of the integration process). In trace G, the relatively large and relatively small sawteeth correspond to normal and premature terminations, respectively. Note that, because an integration process can start only when trace A crosses the zero level, not each waveform representing a data bit in trace A is being integrated in the signal-processing circuit of Solhjell. For example, the Applicant directs the Examiner's attention to the portions of trace A corresponding to the first and third "zeros" in sequence DA and the corresponding portions of trace G. Inspection of trace G reveals that it does not have any sawteeth corresponding to those portions of trace A. It is therefore clear that **not every** waveform representing a binary "zero" or a binary "one" is integrated in the signal-processing circuit of Solhjell. In contrast, claim 1 explicitly specifies that "**each** waveform is integrated over the sampling window width." It is therefore submitted that Solhjell does not teach or suggest this limitation of claim 1.

For all these reasons, the Applicant submits that claim 1 is allowable over the cited references. For similar reasons, the Applicant submits that claims 11, 21, and 24 are also allowable over the cited references. Since the rest of the claims depend variously from claims 1, 11, and 21, it is further submitted that those claims are also allowable over the cited references. The Applicant submits therefore that the rejections of claims under §§ 102 and 103 have been overcome.

Each of claims 2, 12, and 22 further specifies that, when the integration result is greater than or equal to the decision threshold value, the bit value is binary "1" and, when the integration result is smaller than the decision threshold value, the bit value is binary "0". The Applicant submits that Solhjell does not teach or suggest this limitation because in his signal-processing circuit the integration results of trace G are transformed as shown by traces H and E before the final binary output of trace F is generated (see Solhjell's Fig. 4) and this transformation is different from that specified in each of claims 2, 12, and 22. This fact provides additional reasons for the allowability of claims 2, 12, and 22 over Solhjell.

In view of the above amendments and remarks, the Applicant believes that the pending claims are in condition for allowance. Therefore, the Applicant believes that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Respectfully submitted,

Date: 03/22/2007   /Yuri Gruzdkov/
Customer No. 46850   Yuri Gruzdkov
Mendelsohn & Associates, P.C.   Registration No. 50,762
1500 John F. Kennedy Blvd., Suite 405   Agent for Applicant
Philadelphia, Pennsylvania 19102   (215) 557-8544 (phone)
                                          (215) 557-8477 (fax)